

### **Abstract of the Disclosure**

The invention relates to covalent modification of proteins through their conjugation with other proteins. More particularly, the invention relates to the modulation of such conjugation involving the protein NEDD8. The invention provides compositions and methods for detecting and/or modulating the activation and/or conjugation of NEDD8, as well as compositions and methods for discovering molecules which are useful in detecting and/or modulating the activation and/or conjugation of NEDD8. The present invention arises from the purification and characterization of novel NEDD8 activating and conjugating enzymes.